IN THE CLAIMS:

Please cancel claims 1-70 and 88-97 without prejudice and amend the claims as follows.

1-70. (Canceled)

71. (Previously Presented) A method of fabricating multiple optical devices on a glass panel, comprising:

positioning a glass panel in a first processing chamber;

depositing a lower cladding on the glass panel;

densifying the deposited lower cladding;

positioning the glass panel in a second processing chamber;

depositing a core layer on the lower cladding;

patterning and etching the core layer to define a pattern of optical devices;

positioning the glass panel in a third processing chamber; and

depositing an upper cladding over the patterned optical devices.

72. (Original) The method of claim 71 wherein the upper cladding is densified following deposition thereof.

73. (Previously Presented) The method of claim 71 wherein the glass panel defines one or more die and the die have one or more optical devices formed thereon and further have a major dimension greater than a minor dimension.

74. (Original) The method of claim 71 wherein the utilization of the glass panel is greater than about 75%.

75. (Original) The method of claim 72 wherein the devices formed on a single die cover an area of at least about 400 cm^2.

76. (Original) The method of claim 73 wherein a single die comprising one or more optical devices has a shape similar to the glass panel.

77. (Original) The method of claim 73 wherein the deposition steps are performed in one or more processing systems wherein each deposition step requiring densification is performed on a system having at least one deposition chamber and at least one densification chamber.

78. (Original) The method of claim 73 wherein the die and the substrate have the same form factor.

79. (Original) The method of claim 73 wherein the at least two sides of a die are parallel to at least two sides of the glass panel on which the die are formed.

80. (Previously Presented) The method of claim 71 wherein the glass panel is 400mm by 500mm.

81. (Previously Presented) The method of claim 71 wherein the glass panel has an area of about 400cm^2 or greater.

82. (Previously Presented) The method of claim 71 wherein the glass panel is a TFT panel.

83. (Currently Amended) The method of claim 71 wherein the glass panel is made of a material selected from the group consisting of quartz, silica, fused silica or combinations thereof.

84. (Currently Amended) The method of claim 71 wherein the lower cladding is made of a material selected from the group consisting of USG, undoped silica, or combinations thereof.

85. (Currently Amended) The method of claim 84 wherein the core is made of a material selected from the group consisting of PSG, GeO_2, SiON, Si_3N_4, and silicon.

86. (Currently Amended) The method of claim 85 wherein the upper cladding is made of a material selected from the group consisting of BPSG.

87. (Original) The method of claim 71 wherein the step of depositing a lower cladding layer and densifying the lower cladding is performed on the same processing system.

88-97. (Canceled)

98. (Currently Amended) A method for forming a portion of an optical device on a ~~flat panel~~ substrate, comprising:

positioning a ~~flat panel~~ substrate in a first ~~processing~~ deposition chamber on a processing system;

depositing a lower cladding layer on the ~~flat panel~~ substrate;

positioning the ~~flat panel~~ substrate in a densification chamber on the same processing system and treating the substrate therein;

positioning the substrate in a second deposition chamber to deposit a core layer on the lower cladding layer; and then

positioning the substrate in the densification chamber on the processing system and treating the substrate therein.

99. (Original) The method of claim 98 wherein the lower cladding layer comprises USG and the core layer comprises PSG.

100. (Original) The method of claim 99 wherein treating the substrate in the densification chamber comprises exposing the substrate to a rapid thermal anneal process.

101. (Original) The method of claim 100 wherein the substrate is heated to a temperature above about 1000°C.

102. (Original) The method of claim 100 further comprising performing lithography steps on the substrate to define a core pattern and then depositing an upper cladding on the core pattern and then treating the substrate in a densification chamber.

103. (Currently Amended) The method of claim 102 wherein the ~~flat panel~~ substrate has an area of at least about 400cm^2.

104. (Currently Amended) The method of claim 103 wherein the ~~flat panel~~ substrate has a major side longer than a minor side.

105. (Currently Amended) The method of claim 103 wherein the ~~flat panel~~ substrate is made of a material selected from the group consisting of quartz, silica, and fused silica.

106. (Original) A method of forming an optical device on a substrate, comprising depositing one or more of a lower cladding, a core and an upper cladding and heat treating one or more of the lower cladding, the core and the upper cladding in situ following deposition thereof.

107. (Original) The method of claim 106 further comprising depositing the core layer and forming one or more light propagating channels in the core.

108. (Original) The method of claim 107 wherein the upper cladding is heat treated in situ following deposition thereof.

109. (Original) The method of claim 108 wherein the lower cladding is heat treated in situ following deposition thereof.

110. (Original) The method of claim 106 wherein the lower cladding is heat treated in situ following deposition thereof.

111. (Original) The method of claim 110 wherein the upper cladding is heat treated in situ following deposition thereof.

112. (Original) The method of claim 106 wherein the core is heat treated in situ following deposition thereof.

113. (Original) The method of claim 108 further comprising depositing an encapsulation layer over the upper cladding.